

SV3-054B

Service

SV3-054B

Gold Star Audio

SERVICE MANUAL**for
service technician****GoldStar****STEREO CASSETTE RECORDER
with RADIO****TSR-580** (FM/SW/MW/LW)**TSR-585** (FM/SW₂/SW₁/MW)**SPECIFICATIONS**

This specifications may be changed for improvement of performance without notice.

Radio section

Circuit system Superheterodyne
AM/FM MPX Stereo

Antenna AM: Ferrite ant.
FM: Double rod ant.

Frequency range FM: 87.5-108MHz
SW₂: 6.8-22.5MHz
SW₁: 2.25-7.2MHz
SW: 5.8-18.3MHz
MW: 525-1,605kHz
LW: 150-350kHz

Intermediate frequency AM: 455 (465) kHz
FM: 10.8MHz

Usable sensitivity MW: 54 dB LW: 60 dB
FM: 4 μ V SW: 45 dB
SW₂: 45 dB SW₁: 56 dB

Signal to noise ratio AM: 40 dB
FM: 54 dB

Frequency response (0 \pm 4 dB)
. 100-10,000 Hz

FM stereo separation 36 dB

Cassette section

Circuit system 4 Track 2 Ch. stereo

Recording system AC Bias (57 kHz)

Erasing system AC Erase

F.F. & Rew time 90 sec (c-60)

Wow & Flutter 0.09% (WRMS)

Frequency response

P/B Nor.: 100-10,000Hz
CrO₂: 100-12,000Hz

REC/PB Nor.: 100-8,000Hz
CrO₂: 100-10,000Hz

Signal to Noise ratio

P/B 50 dB

REC/PB 45 dB

General

Power output (10% T.H.D.) . . . 4.5W + 4.5W

Power supply AC 220V 50Hz
DC 12V (DM 1.5V x 8)

Semiconductors 7IC's, 37TR's, 31Diodes,
4 LED's

Power consumptions 26W

Speakers Woofer 16cm (3.2 Ω) x 2
Tweeter 5cm (4 Ω) x 2

Weight 7.3kg (without Batt)

Dimensions 520(W)x260(H)x130(D) mm

IMPORTANT SAFETY NOTICE

Components of important for safety are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent electrical shock, fire, or other hazards. Do not modify the original design without permission of Gold Star Co., Ltd.

To the service technician

The service manual contains detailed service information for Model TSR-580/585.
Illustration of the model appears on front cover.

Please give attention to next caution.

The followings are the safety servicing guidelines for all audio amplifiers and radio receivers.

Service work should be performed only after you are familiar with all of the following safety guide.
To do otherwise increases the risk of potential hazards and injury to the user.

Safety guide

1. Be sure that all components are positioned in such a way to avoid possibility of adjacent components shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a receiver.
3. Check for frayed insulation on wires including the AC-cord. Also check across-the-line-components for damage and replace if necessary.
4. All fuses and certain resistors and capacitors which are the flameproof type must be replaced with exact same types to prevent potential fire hazard.
5. After re-assembly of the set always perform an AC-leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminal, etc. to be sure the set is safe to operate without danger of electrical shock.

To order repair parts

Part orders must contain

1. Model Number — found on front cover in this service manual.
2. Part Number, Description and Quantity.

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DIAL CORD ARRANGEMENT

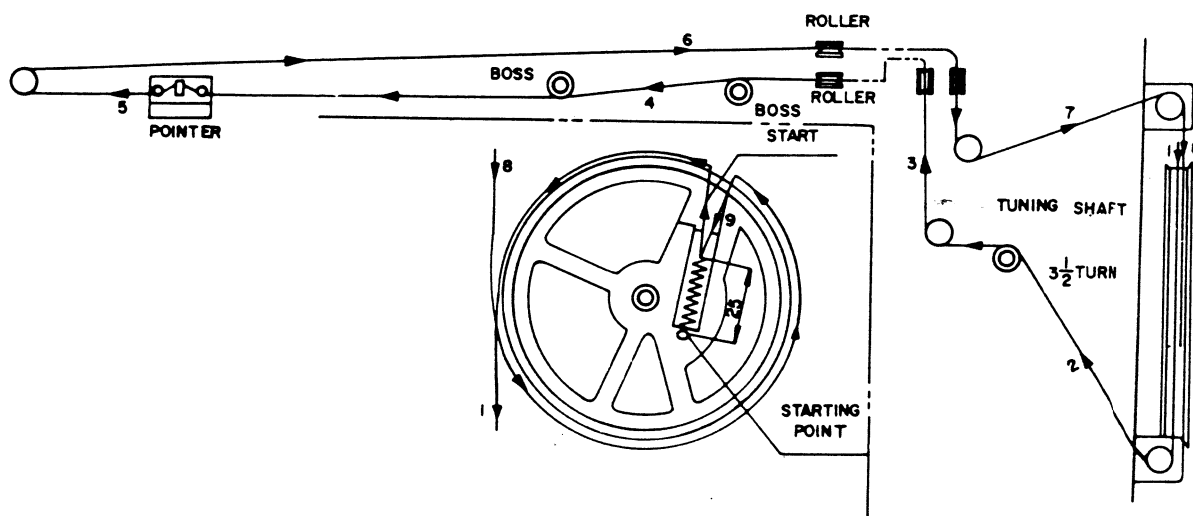


Fig. 1.

Set the varicon to minimum frequency and string the cord by following the number sequence order as shown in Fig. 1.

ALIGNMENT INSTRUCTIONS

This cassette radio has been aligned at the factory and normally will not require further adjustment. As a result, it is not recommended that any attempt is made to modify any circuit. If any parts are replaced or if anyone tampers with the adjustment, realignment may be necessary.

Test equipment required

1. AM/FM signal generator
2. IF sweep generator (10.7 MHz) for FM
3. IF sweep generator (455 kHz or 465 kHz) for AM
5. Standard loop antenna for AM
6. VTVM
7. Oscilloscope
8. Frequency counter
9. Audio frequency oscillator
10. Test tapes
 - a) MTT-144 (10 kHz)
 - b) MTT-122B (1 kHz)
 - c) MTT-501 (Blank tape)

1. CASSETTE ALIGNMENT

Tape head and capstan cleaning

1. Periodically clean the tape head, capstan drive shaft and other tape handling surfaces to insure proper tape handling and optimum frequency response.
2. Use a cotton swab dipped in head cleaner or denatured alcohol to clean all tape handling surfaces. Wipe dry.

Tape head demagnetization

When servicing tape unit, do not use magnetized screwdrivers or wrenches near the tape head since they can magnetize the head.

A magnetized head will result in loss of high frequency response and increased noise.

Head adjustment

Head adjustment is normally required when the head is replaced or for cases of cross-talk and poor high frequency response.

Adjustment points

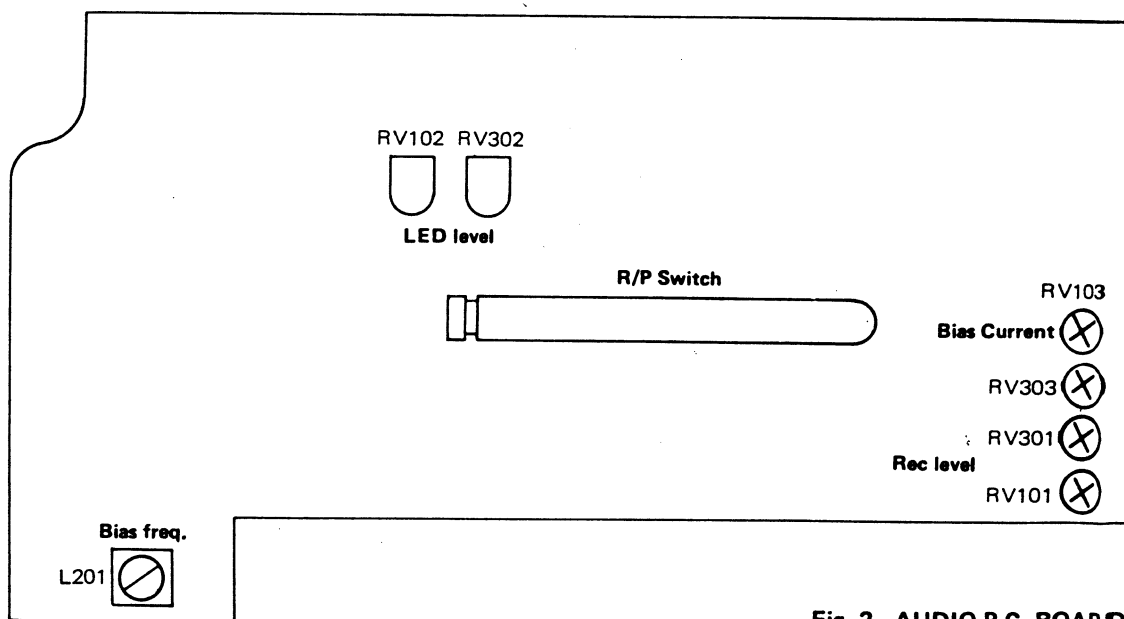
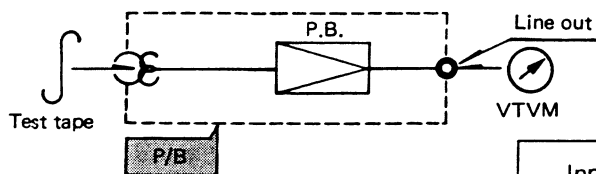


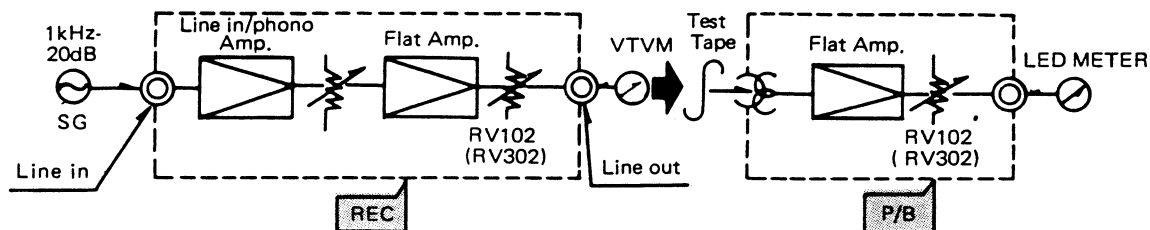
Fig. 2. AUDIO P.C. BOARD

AZIMUTH ADJUSTMENT



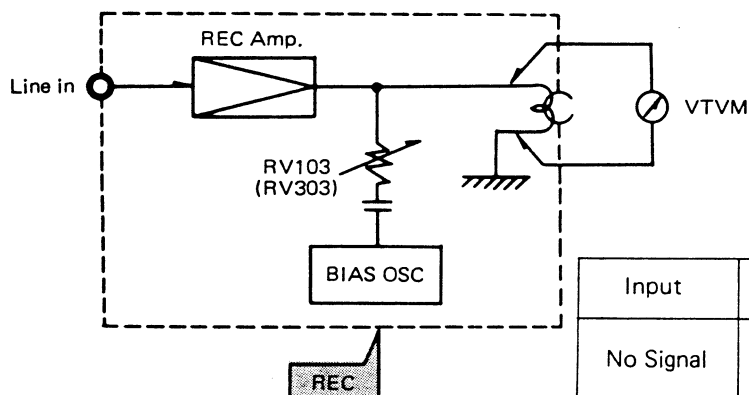
Input	Adjust for	Adjustment
MTT-114 (10kHz)	Maximum	Azimuth Adjusting Screw

LED METER ADJUSTMENT



NO.	Input	Adjust for	Adjustment
1	1kHz-20dB	50mV	SG output
2	MTT-112B (1kHz)	All LED should be lighted	L: RV102 R: RV302

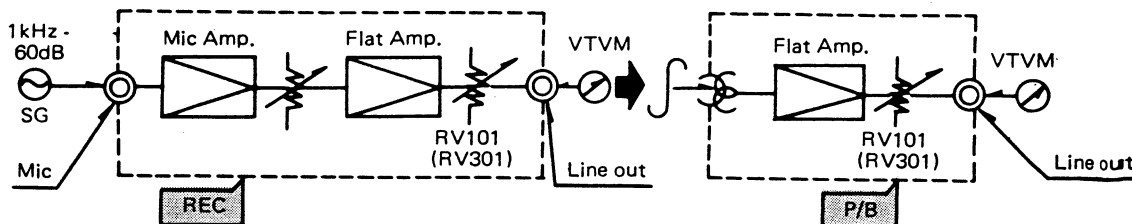
BIAS CURRENT ADJUSTMENT



Input	Adjust for	Adjustment
No Signal	AC 10V \pm 0.5V	L: RV103 R: RV303

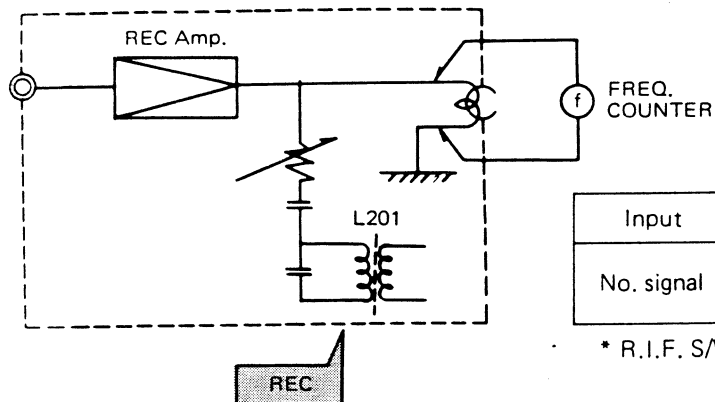
* Tape select: Normal

REC LEVEL ADJUSTMENT



NO.	Input	Adjust for	Adjustment	Remark
1 (REC/PB)	1kHz-60dB	A	L: RV101 R: RV301	REC MODE: AUTO TAPE SEL.: NOR
2 (P/B)	MTT-112B (1kHz)	Lower about 3dB than A	Confirm	"

BIAS FREQUENCY ADJUSTMENT



Input	Adjust for	Adjustment
No. signal	$57 \pm 3\text{kHz}$	L201

* R.I.F. S/W: "2" position

2. RADIO ALIGNMENT

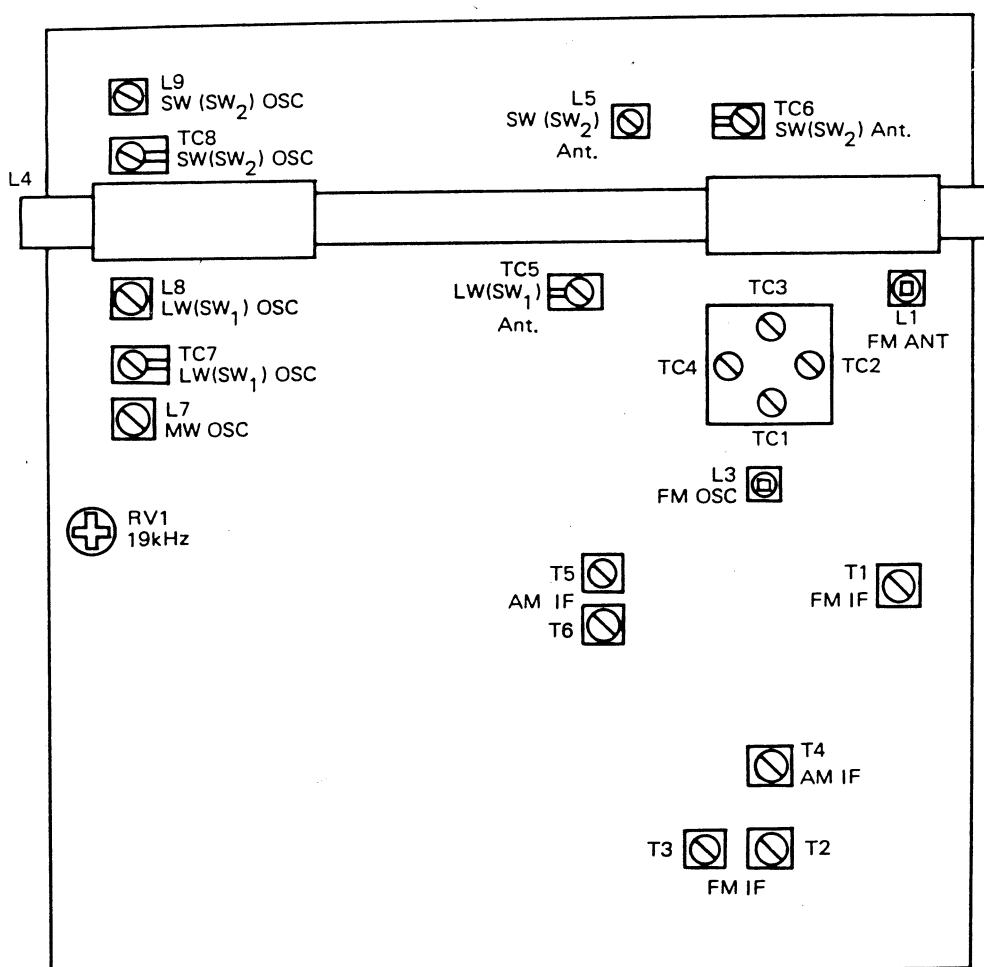


Fig. 3 RF P.C. BOARD

AM Alignment Chart

Step	Item TSR-580 (TSR-585)		Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment Point	Purpose
				Input Terminal	Output Terminal				
1	AM-IF		AM IF sweep generator and oscilloscope or AM IF genescope	AM IF Input	Detector output (C68)	Generator output Probe "A"	Tuning-Gang counter-clockwise (Lowest freq.)	T4 T5 T6	Adjust for the scope pattern with specified marker (IF freq.) as illustrated in fig. 5 (Note 1)
2	MW Oscillator	a	AM SSG 515kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output or detector output	None	Tuning-Gang counter-clockwise (Lowest freq.)	L7	Adjust for maximum gain.
		b	AM SSG 1650kHz (400Hz, 30% Mod) and VTVM				Tuning-Gang clockwise (Highest freq.)	TC4	
		c	Repeat the above item 2-(a), (b) for minimum change.						
3	MW Tracking	a	AM SSG 600kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output terminal or detector output	None	Tune to signal	L4 MW ant. coil	Adjust for maximum gain.
		b	AM SSG 1400kHz (400Hz, 30% Mod) and VTVM					TC3	
		c	Repeat the above item 3-(a), (b) for minimum change.						
4	LW (SW1) Oscillator	a	AM SSG 150kHz (2.3MHz) (400Hz, 30% Mod) and VTVM	LW (SW1) wave magnet ant.	Speaker output terminal or detector output	None	Tuning gang fully counter clockwise (Lowest fre.)	L8	Adjust for maximum gain.
		b	AM SSG 350kHz (7.0MHz) (400Hz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC7	
		c	Repeat the above item 4-(a), (b) for minimum change.						

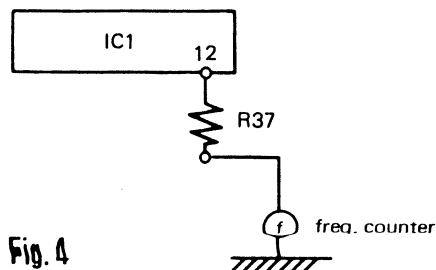
AM Alignment Chart (cont'd)

Step	Item TSR-580 (TSR-585)		Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment point TSR-580 (TSR-585)	Purpose
				Input Terminal	Output Terminal				
5	LW (SW1) Tracking	a	AM SSG 160kHz (2.7MHz) (400Hz, 30% Mod) and VTVM	LW (SW1) wave magnet ant.	Speaker output terminal or detector output	None	Tune to signal	L4 LW ant. coil (SW ₁ ant. coil)	Adjust for maximum gain.
		b	AM SSG 330kHz (6.3MHz) (400Hz, 30% Mod) and VTVM					TC5	
		c	Repeat the above item 5-(a), (b) for minimum change.						
6	SW (SW2) Oscillator	a	AM SSG 6MHz (7MHz) (400Hz, 30% Mod) and VTVM	Ant. input	Sp. output ter. or detector output	SW dummy ant (Probe "C")	Tuning gang fully counter clockwise (Lowest fre.)	L9	Adjust for maximum gain.
		b	AM SSG 18MHz (22 MHz) (400Mz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC8	
		c	Repeat the above item 6-(a), (b) for minimum change.						
7	SW (SW2) Tracking	a	AM SSG 6.5MHz (8MHz) (400Hz, 30% Mod) and VTVM	Ant. input	Speaker output ter. or detector output	SW dummy ant. (Probe "C")	Tune to signal	L5 SW ant. coil (SW2 ant. coil)	Adjust for maximum gain.
		b	AM SSG 16MHz (20MHz) (400Hz, 30% Mod) and VTVM					TC6	
		c	Repeat the above item 7-(a), (b) for minimum change.						

FM Alignment Chart

Step	Item	Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment point	Purpose
			Input Terminal	Output Terminal				
1	FM-IF	FM IF Sweep Generator and oscilloscope or FM IF genescope	FM-IF Input	FM Det Output (C68)	Generator Output Probe "A"	Tuning Gang fully counter-clockwise (Lowest Fre.)	T1 T2	Adjust for scope Pattern with specified marker (10.7MHz) as illustrated in Fig. 7 & 8 (note 2, 3)
	S-Curve						T3	
2	FM Oscillator	a	Ant. Input	Speaker Output Terminal	Generator Output Probe "B"	Tuning Gang fully counter-clock wise (Lowest fre.)	L3	Adjust for maximum gain.
		b	Ant. Input	Speaker Output Terminal	Generator Output Probe "B"	Tuning Gang fully clockwise (Highest fre.)	TC1	Adjust for maximum gain.
		c	Repeat the above item 2-(a), (b) for minimum change.					
3	FM Tracking	a	Ant. Input Terminal	Speaker Output Terminal	Generator Output Probe "B"	Tune to signal	L1	Adjust for maximum gain.
		b	Ant. Input Terminal	Sepaker Output Terminal	Generator Output Probe "B"	Tune to signal	TC2	Adjust for maximum gain.
		c	Repeat the above item 3-(a), (b) for minimum change.					

FM Multiplex Alignment



Adjustment	Remarks
RV1 (10K-B)	Frequency counter should read 19 kHz \pm 0.1 kHz

Note 1.: Adjust T4, T5 and T6 to get maximum gain and symmetry in IF response as shown in Fig. 5.

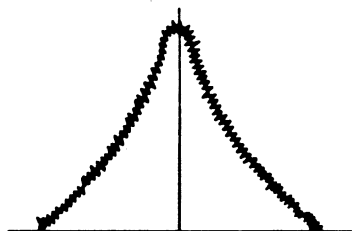


Fig. 5

IF response for weak input signal

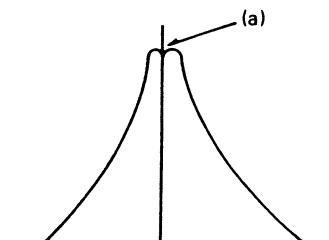


Fig. 6

IF response for strong input signal

After adjust IF response for weak input signal, supply strong input signal and also adjust T4, T5 and T6 to make part (a) flat as shown in Fig. 6.

Note 2.: Adjust output of sweep generator so that noise appears on IF-curve as shown in Fig. 7 below and adjust T1 and T2 for maximum indication.

Note 3.: Adjust T3 to be IF-curve into S-curve (See Fig. 8) and adjust T3 so that declined part of S-curve has to be just linear.

If ceramic filter is used in RF part, adjust T3 so that part (A) and part (B) are symmetrical on either side of vertical line, because the marker of 10.7MHz on sweep generator is not on the center of S-curve.

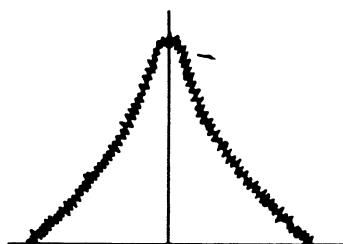


Fig. 7

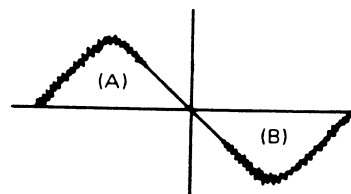
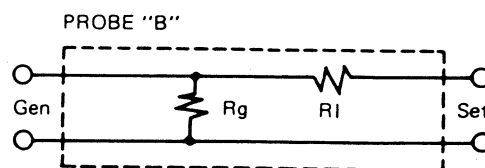
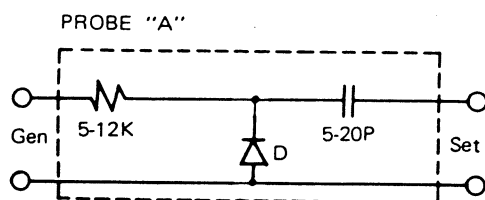


Fig. 8



Rg: FM SSG Output

$$Rl: 75 - \frac{Rg}{2}$$

NOTE: 1. ALL RESISTANCE VALUES ARE IN OHMS (R=1000, M=1000K)
2. ALL CAPACITOR VALUES ARE IN MICRO FARAD (P=100P)
3. LEFT CHANNEL VALUES ARE JUST THE SAME AS RIGHT CHANNEL
VALUES
4. THIS SCHEMATIC DIAGRAM MAY BE CHANGED TO IMPROVE THE
DESIGN WITHOUT NOTICE.

NOTE:

1. ALL RESISTANCE VALUES ARE IN OHMS (K=1000, M=1000K)
2. ALL CAPACITOR VALUES ARE IN MICRO FARAD (P=ALL)
3. LEFT CHANNEL VALUES ARE JUST THE SAME AS RIGHT CHANNEL VALUES
4. THIS SCHEMATIC DIAGRAM MAY BE CHANGED TO IMPROVE OF PERFORMANCE WITHOUT NOTICE

COMPONENT LIST:

SYMBOL	NAME	VALUE	POSITION
S1-110	BAND	MANUAL / AUTO	110
S2-114	REC / PLAY	PLAY	114
S3	FUNCTION	TIME / HEAD / PHONO	115
S4	RECORD	MANUAL / AUTO	116
S5	LOUDNESS	ON / OFF	117
S6	TAPE	MON / C-02	118
S7	LINE / PHONO	PHONO	119
S8	RIF	1.2.3	120
S9	LEW	ON / OFF	121
S10	POWER	OFF / ON / TIMER	122
S11	MEMORY	ON / OFF	123
S12	COUNTER	ON / OFF	124
S13	PAUSE	ON / OFF	125
S14	CLOCK	ON / OFF	126

ELECTRICAL SERVICE PARTS LIST

SYMBOL NO.	PART NO.	DESCRIPTION
INTEGRATED CIRCUITS		
IC1	668N061A	IC, AN7410
IC101, 301	668-605A	IC, KIA7137P
IC201	668-632A	IC, KA2221
	668N063A	IC, LA3161
IC202	668N066A	IC, AN7156N
IC411, 421	668-132A	IC, LB1405

TRANSISTORS		
TR1	662-601A	TR, MPS9426B
TR 2, 3	665-819A	TR, KTC1923-R
TR4, 5	661N007D	TR, GS9017H
	665-701B	TR, KTC9011A-H
TR6, 7, 8	661N007C	TR, GS9017G
	665-701B	TR, KTC9011A-H
TR9	665-886D	TR, GS9023J
	665-704B	TR, KTC9014A-C
TR101, 301	661N025A	TR, GS9024K
	665-704B	TR, KTC9014A-C
TR102, 302	661N004E	TR, GS9014J
	665-704B	TR, KTC9014A-C
TR104, 304	661N001F	TR, GS9011I
	665-704A	TR, KTC9014A-B
TR105, 305	661N003C	TR, GS9013H
	665-703B	TR, KTC9013H
TR201	661N025A	TR, KS9024K
	665-704B	TR, KTC9014A-C
TR203	665-886D	TR, GS9023J
	665-703C	TR, KTC9013A-I
TR204, 205, 206	661-030B	TR, GS9022I
	665-702B	TR, KTC9012A-H
TR207	665-886D	TR, GS9023J
	665-704B	TR, KTC9014A-C
TR208	661N027B	TR, GS2013G

SYMBOL NO.	PART NO.	DESCRIPTION
TR209	661N027A	TR, GS2013H
TR210	661-030B	TR, GS9022I
	665-702B	TR, KTC9012A-H
TR211, 212	665-886D	TR, GS9023J
	665-704B	TR, KTC9014A-C
TR213	661N028A	TR, GS2053H
TR214	665-886D	TR, GS9023J
	665-704B	TR, KTC9014A-C
TR215	661N026A	TR, GS9022J
	665-702B	TR, KTC9012A-H
TR216	661N028A	TR, GS2053H
TR217	665-886D	TR, GS9023J
	665-704B	TR, KTC9014A-C
TR401	665-886B	TR, GS9023H
	665-704B	TR, KTC9014A-C
TR411, 431	661-030B	TR, GS9022I
	665-702B	TR, KTC9012A-H
TR412, 413	665-886B	TR, GS9023H
432, 433	665-704A	TR, KTC9014A-B

DIODES		
D1	654-618A	DIODE, 1S2236
D2	652-015B	DIODE, KDS1555
D3, 4	651-001D	DIODE, FM2-1K261
D5, 6, 7, 8	651-001C	DIODE, AM 1K60
D10	654-622D	DIODE, UZ-4.7B
D101, 102	652-015B	DIODE, KDS1555
D202, 203	652-015B	DIODE, KDS1555
D204	654-623F	DIODE, ZENER
D205	652-015B	DIODE, KDS1555
D206	652-005A	DIODE, 1N4001
D210	652-015B	DIODE, KDS1555
D211	654-612B	DIODE, ZENER ZPD10

SYMBOL NO.	PART NO.	DESCRIPTION
D401, 402	653-109A	LED, LN 05202P
D403	653-401B	LED, LN317RP-TUNING
D404, 405, 406	653-401A	LED, LN217RP-ST, REC, POWER
D501	652-021D	DIODE, M1-151R
D502	652-021C	DIODE, M1-151

SWITCHES

S1	556N045A	SWITCH-BAND
S2	552N073B	SWITCH-REC/PLAY
S3	556N044A	SWITCH-FUNCTION
S4	556N050B	SWITCH-REC MODE
S5	556N050C	SWITCH-LOUDNESS
S6	556N052A	SWITCH-Nor/CrO ₂
S7	552N077A	SWITCH-PHONO/LINE IN
S8	552-614A	SWITCH-RIF
S10	556-012A	SWITCH-POWER
S11	555N015B	SWITCH-MEMORY

COILS AND TRANSFORMERS

L1	635-020E	COIL, FM OSC
L2	635-602A	COIL, FM RF
L3	635-003B	COIL, FM OSC
L4	632N042B	COIL, MW/LW ANT (TSR-580)
	632N042A	COIL, MW/SW1 ANT (TSR-585)
L5	634N020F	COIL, SW ANT (TSR-580)
	634N020D	COIL, SW2 ANT (TSR-585)
L6	639-003L	COIL, PADDING 180 μ H
L7	634-015C	COIL, MW OSC
L8	634N037F	COIL, LW OSC (TSR-580)
	634N020B	COIL, SW1 OSC (TSR-585)
L9	634N020E	COIL, SW OSC (TSR-580)
	634N020C	COIL, SW2 OSC (TSR-585)
L10	636-006D	COIL, CHOKE 330 μ H

SYMBOL NO.	PART NO.	DESCRIPTION
L101, 301	639-602F	COIL, PEAKING 6.6 mH
L102, 302	639-003N	COIL, PADDING 3.3 mH
L103, 303	637-005B	COIL, PEAKING 33 mH
L201	634-036C	COIL, TAPE OSC
L202	639-003I	COIL, PADDING 4.7 μ H
L204, 205	639-003I	COIL, PADDING 4.7 μ H
T1	644-018F	TRANS, FM IF
T2	647-008C	DISCRIMINATOR
T3	647-008D	DISCRIMINATOR
T4	644-019C	TRANS, AM IF
T5	644-019D	TRANS, AM IF
T6	644-019G	TRANS, AM IF

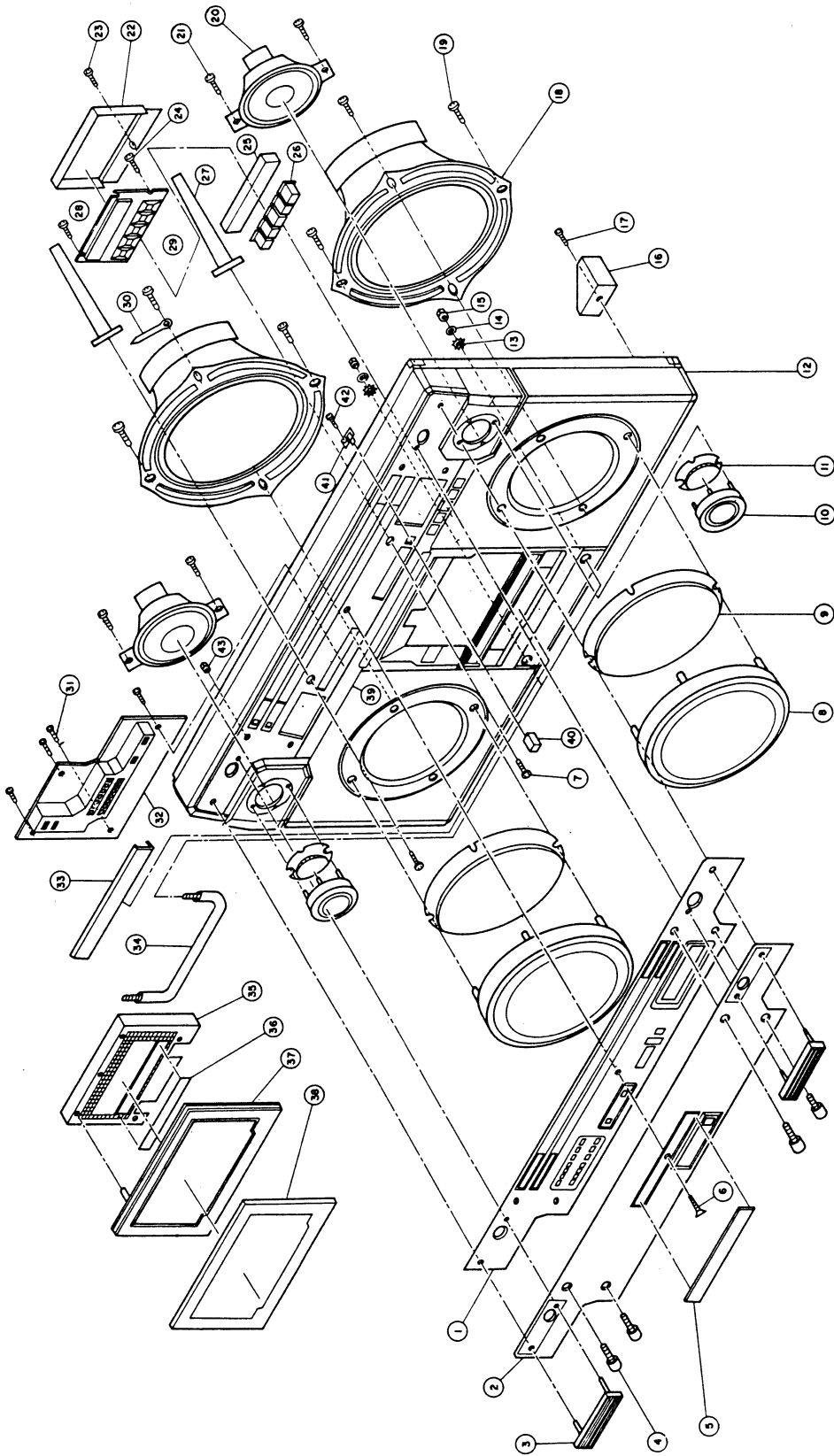
VARIABLE RESISTORS

RV1	613N002F	VR, SEMI-FIXED 10KB
RV101, 301	613N002J	VR, SEMI-FIXED 100KB
RV103, 303	613N005H	VR, SEMI-FIXED 100KB
VR101, 301	611N053P	VR, 20KA-REC MODE
VR201	611N027G	VR, 100KA-TREBLE
VR202	611N072H	VR, 100KB-BASS
VR203	611N072F	VR, 20KA-VOLUME
VR204	611N089C	VR, 20KW-BALANCE
VR205	611N053P	VR, 20KA-MIX. MIC.

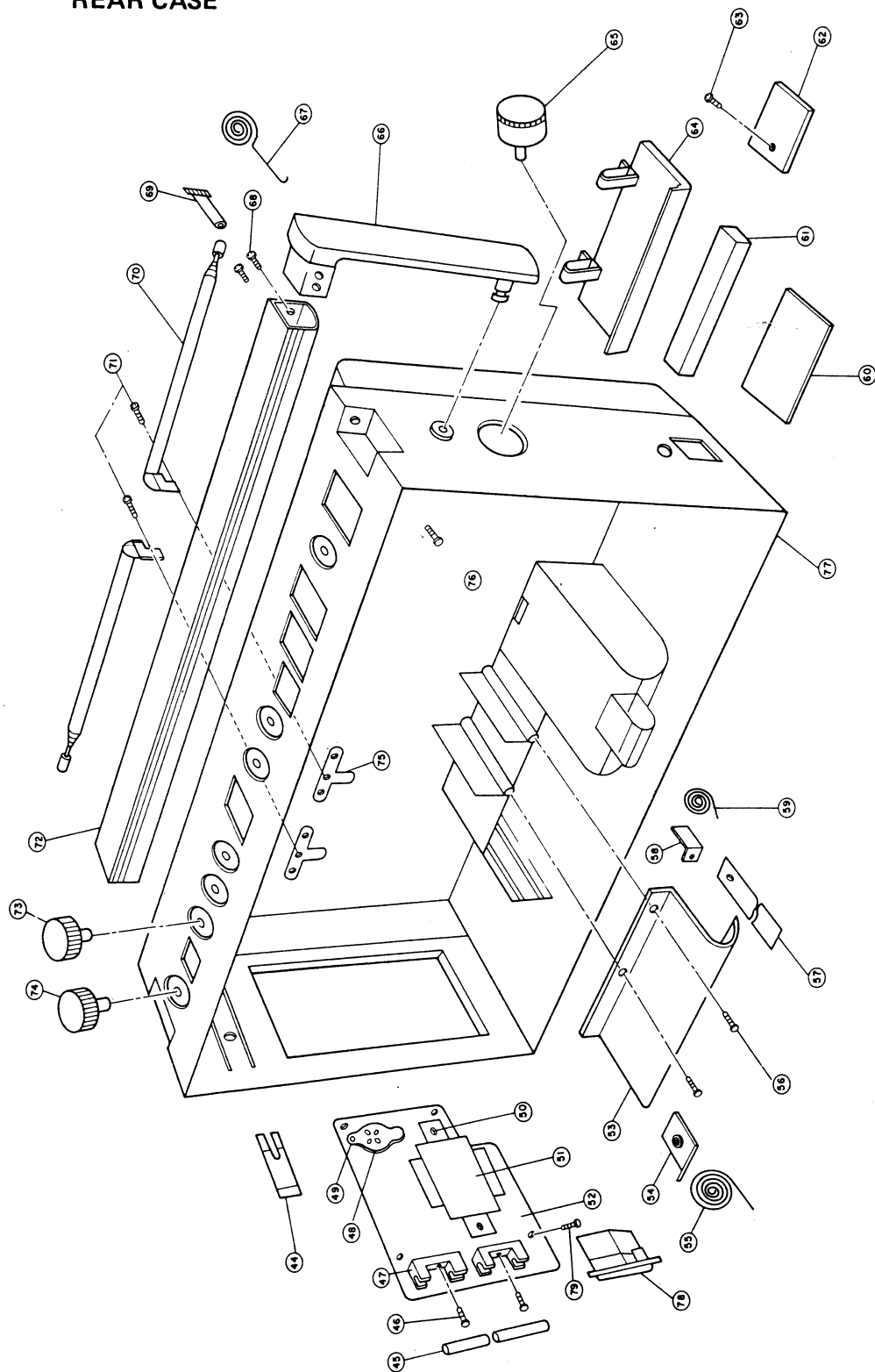
MISCELLANEOUS

VC1-4	622N048E	VARICON, POLY P2Z22BPT
BPF	616-011A	FILTER, BAND PASS
CF1	616-007A	FILTER, CERAMIC
LPF1, 2	616-009A	FILTER, LOW PASS
	572-042B	JACK-EXT. SP, MIC JACK
	572-034D	JACK-HEADPHONE
	572-002A	JACK-MIX. MIC.

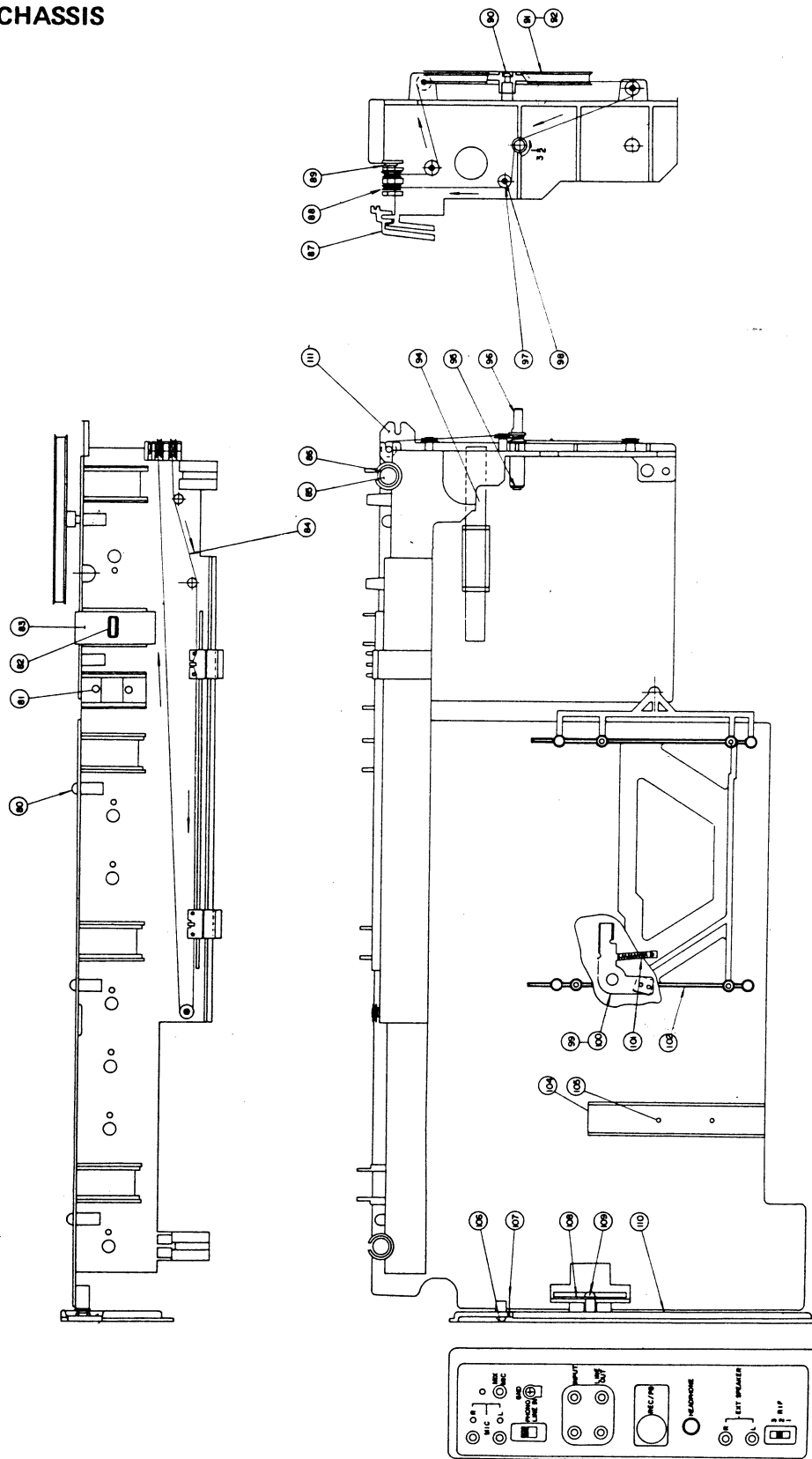
EXPLODED VIEW FOR CABINET



REAR CASE



CHASSIS

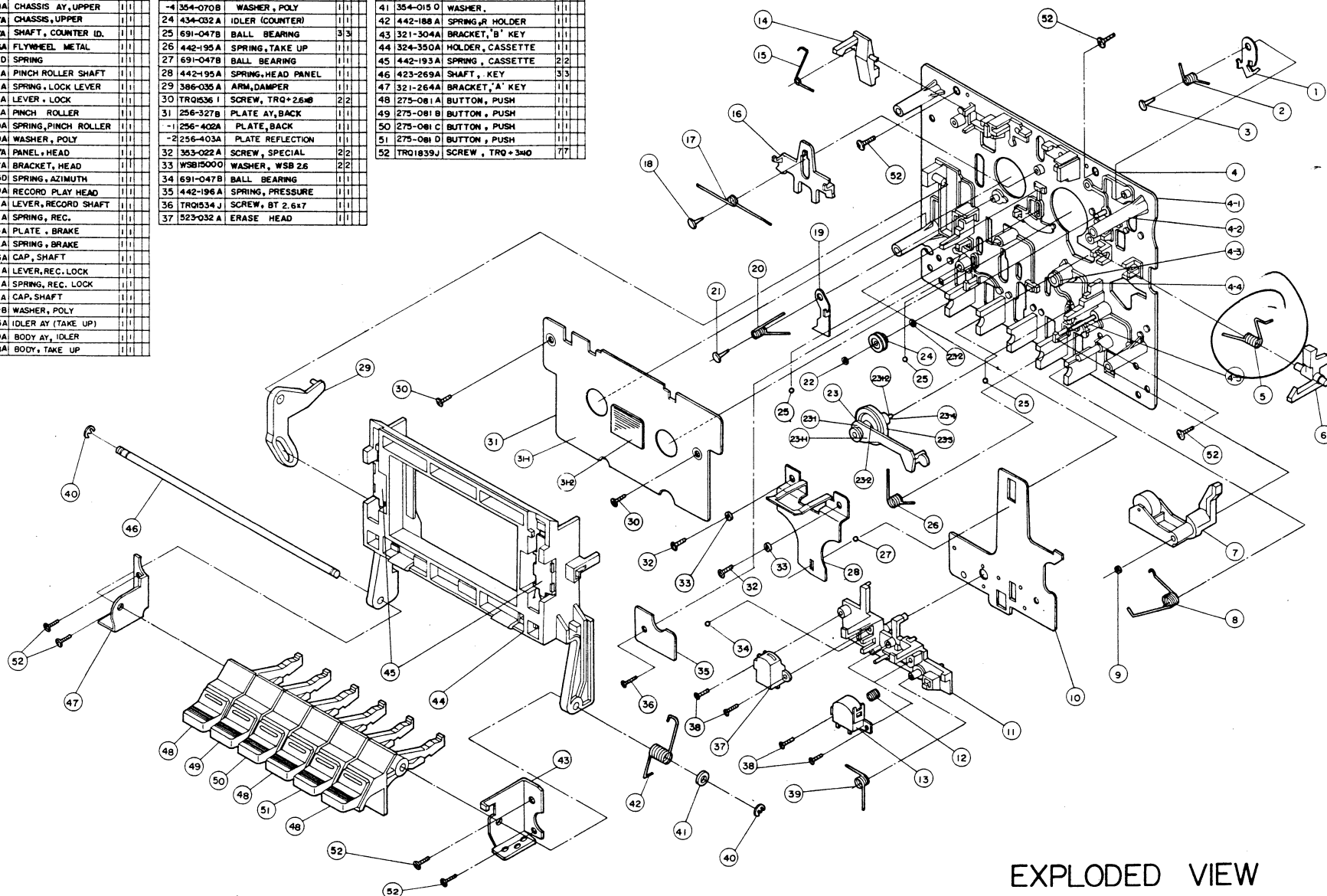


PARTS LIST FOR CABINET EXPLODED VIEW

NO.	PART NO.	DESCRIPTION	NO.	PART NO.	DESCRIPTION
1	252N198E	Plate Scale (TSR-585)	55	442N262A	Spring Batt (B)
	252N198D	Plate Scale (TSR-580)	56	353N025G	Screw Special
2	258N109A	Panel Clear	57	455N004E	Ribon Battery
3	224N033A	Grille Mic	58	254N028A	Plate Batt Cont (B)
4	253N068A	Special Screw	59	442N260A	Spring Batt(C)
5	253N006D	Plate Speaker Name	60		
6	TCQ1941J	Screw	61	447N056A	Cushion Battery
7	TRQ2243J	Screw	62	221N410B	Cover Vol Selector
8	224N034B	Grille Speaker (A)	63	254N025C	Screw Special
9	365N064B	Metal Speaker (A)	64	221N411A	Cover Battery
10	224N035B	Grille Speaker (B)	65	271N159A	Knob Tuning
11	365N072B	Metal Speaker (B)	66	324N422A	Holder Handle
12	217N247H	Csae Front (TSR-585)	67	442N261A	Spring Batt A
	217N247I	Case Front (TSR-580)	68	MAC1839L	Screw
13	WTB2200J	Lock Washer	70	532N035C	Antenna Rod
14	WSB2200J	C, Washer	71	MAC1845L	Screw
15	NHA2200J	Nut	72	261N098A	Handle
16	321N281A	Bracket AC Jack	73	272N085A	Knob Tone
17	353N025F	Screw Special	74	272N084A	Knob Volume
18	541-141A	Speaker Woofer	75	MPC1836J	Screw
19	353-025C	Screw Special	78	577-003B	2P Socket
20	541-119B	Speaker Tweeter	79	353-052C	Screw
21	353-052C	Screw	80	353N025G	Screw Special
22	217N251A	Case Shield	81	MPC1536J	Screw
23	353-052C	Screw Special	82	273N271A	Knob S/W(A)
24	353-052J	Screw	83	221N413B	Cover Rubber (B)
25	447N068B	Cushion	84	886N0001	Cord Dial
26	273N270A	Knob Clock	85	542N023A	Mic Condenser
27	381N004A	Boss	86	447N015A	Bushing Mic
28	TRQ1536J	Screw	87	361A133A	Rointer
29	511-005C	Clock Ay	88	434N003F	Roller
30	328N008A	Lead band	89	423N272A	Shaft Pulley
31	353N025F	Screw Special	90	MPC1536J	Screw
32	324N423A	Holder LED	91	432N038A	Pulley Dial
33	251N164A	Plate CST Deco	92	442N004E	Spring
34	275N079A	Button Guard	34	632N043A	Coil Ay MW/SW1 Ant (TSR-585)
35	324N426A	Holder CST Cover		632N043B	Coil Ay MW/LW Ant (TSR-580)
36	246N027A	Deco, Holder CST	95	354N007D	Washer E-Ring
37	236N132A	Window CST Cover	96	423N397A	Shaft Tuning
38	246N026A	Deco, CST Cover	97	434N031A	Roller
39	251N163B	Plate Clock Deco	98	423N254A	Shaft Roller
40	273N272A	Knob Memory S/W	99	411-028A	Mechanism Rec
41	555N015B	Switch Push (Memory SW)	100	353N018A	Screw Special
42	TRQ1536J	Screw	101	442N004R	Spring
43	NHA1800J	Nut	102	313N157A	Chassis Deck
44	322N129A	Stopper Handle	104	255N053A	Plate Heat Sink
45	585N007J	Fuse 200mT	105	TRQ1839J	Screw
46	TRQ1836J	Screw	106	353N025L	Screw
47	585N113A	Holder Fuse	108	324N427A	Holder Jack
50	MPC2236J	Screw	109	353N018A	Screw Special
51	641-656C	Trans Power 220V	110	235-001B	Board Jack
52	321N368D	Bracket Power	111	313N156A	Chassis
53	384N029A	Battery Guide	112	217N246E	Case, rear (TSR-585)
54	254N029A	Plate Batt Cont(A)		217N246D	Case rear (TSR-580)

EXPLODED VIEW FOR DECK MECHANISM (D-301 FB 1/2) & PARTS LIST

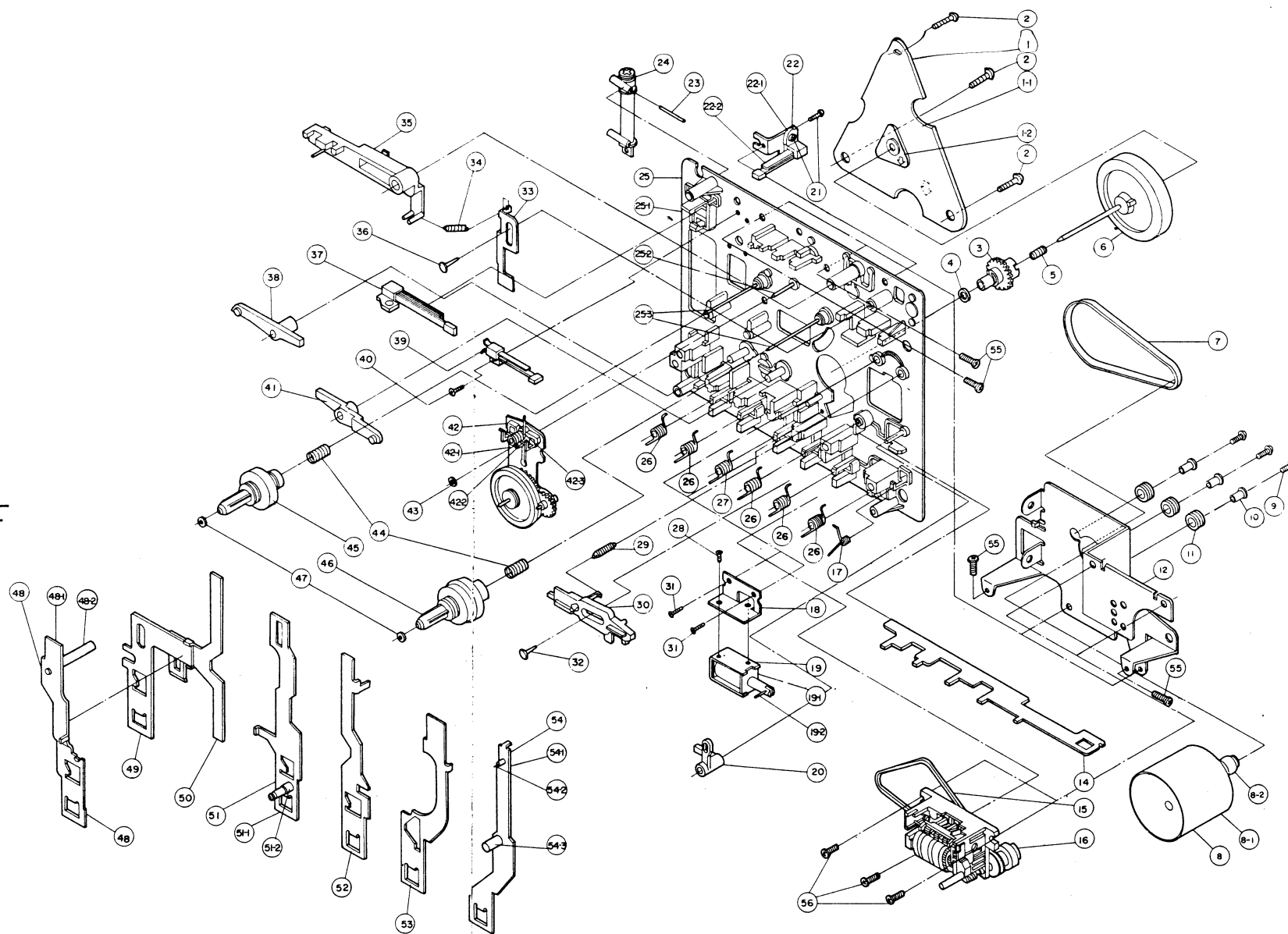
NO	PART NO	DESCRIPTION	QTY	NO	PART NO	DESCRIPTION	QTY	NO	PART NO	DESCRIPTION	QTY
1	374-007A	CAM, LEVER	11	-12	423-295A	SHAFT, TAKE UP ID	11	38	353-034C	SCREW, SPECIAL	44
2	442-175A	SPRING, PAUSE CAM	11	-2	354-031B	WASHER, TEFRON	22	39	442-187A	SPRING, PLAY	11
3	276-026A	CAP, SHAFT	11	-3	434-034A	IDLER AY	11	40	354-032E	WASHER, STOPPING	22
4	311-170A	CHASSIS AY, UPPER	11	-4	354-070B	WASHER, POLY	11	41	354-015D	WASHER	11
-1	313-137A	CHASSIS, UPPER	11	24	434-032A	IDLER (COUNTER)	11	42	442-188A	SPRING, R HOLDER	11
-2	423-257A	SHAFT, COUNTER ID.	11	25	691-047B	BALL BEARING	33	43	321-304A	BRACKET, 'B' KEY	11
-3	344-006A	FLYWHEEL METAL	11	26	442-195A	SPRING, TAKE UP	11	44	324-350A	HOLDER, CASSETTE	11
-4	442-101D	SPRING	11	27	691-047B	BALL BEARING	11	45	442-193A	SPRING, CASSETTE	22
-5	423-258A	PINCH ROLLER SHAFT	11	28	442-195A	SPRING, HEAD PANEL	11	46	423-269A	SHAFT, KEY	33
5	442-179A	SPRING, LOCK LEVER	11	29	386-035A	ARM, DAMPER	11	47	321-264A	BRACKET, 'A' KEY	11
6	333-124A	LEVER, LOCK	11	30	TRQ1536 I	SCREW, TRQ 2.6x8	22	48	275-081A	BUTTON, PUSH	11
7	434-035A	PINCH ROLLER	11	31	256-327B	PLATE AY, BACK	11	49	275-081B	BUTTON, PUSH	11
8	442-180A	SPRING, PINCH ROLLER	11	-1	256-402A	PLATE, BACK	11	50	275-081C	BUTTON, PUSH	11
9	354-070A	WASHER, POLY	11	-2	256-403A	PLATE REFLECTION	11	51	275-081D	BUTTON, PUSH	11
10	258-097A	PANEL, HEAD	11	32	353-022A	SCREW, SPECIAL	22	52	TRQ1839J	SCREW, TRQ 3.4x0	77
11	321-267A	BRACKET, HEAD	11	33	WSB15000	WASHER, WSB 2.6	22				
12	442-075D	SPRING, AZIMUTH	11	34	691-047B	BALL BEARING	11				
13	523-040A	RECORD PLAY HEAD	11	35	442-196A	SPRING, PRESSURE	11				
14	333-125A	LEVER, RECORD SHAFT	11	36	TRQ1534 J	SCREW, BT 2.6x7	11				
15	442-189A	SPRING, REC.	11	37	523-032A	ERASE HEAD	11				
16	256-323A	PLATE, BRAKE	11								
17	442-178A	SPRING, BRAKE	11								
18	276-026A	CAP, SHAFT	11								
19	333-122A	LEVER, REC. LOCK	11								
20	442-176A	SPRING, REC. LOCK	11								
21	276-026A	CAP, SHAFT	11								
22	354-070B	WASHER, POLY	11								
23	434-033A	IDLER AY (TAKE UP)	11								
-1	316-039A	BODY AY, IDLER	11								
-1	316-038A	BODY, TAKE UP	11								



EXPLODED VIEW
MODEL: D-301FB (1/2)

EXPLODED VIEW FOR DECK MECHANISM (D-301 FB 2/2) & PARTS LIST

NO	PART NO	DESCRIPTION	QTY
			ABCD
1	324-351A	HOLDER, FLYWHEEL	1
-1	324-349A	HOLDER, FLYWHEEL	1
-2	341-113A	BUSHING, TRUST	1
2	TRO1839J	SCREW, TRQ-340	3
3	433-033A	WHEEL, ACTION	1
4	354-031D	WASHER	1
5	442-101E	SPRING	1
6	433-032A	FLYWHEEL, AY	1
7	451-010B	RUBBER, BELT	1
8	414-032C	MOTOR, AY	1
-1	414-045A	MOTOR	1
-2	432-025B	PULLEY, MOTOR	1
9	MPC522J	SCREW, MPC-2.6x4	3
10	341-057A	BUSHING	3
11	477-004A	RUBBER, MOTOR	3
12	321-372A	BRACKET, MOTOR	1
13	MPC1522J	SCREW, MPC-2.6x4	3
14	256-321A	PLATE, LOCK	1
15	451-011A	RUBBER, BELT	1
16	517-008A	TAPE, COUNTER	1
17	442-184A	SPRING, LOCK PLATE	1
18	321-266A	BRACKET, SOLENO	1
19	691-070A	SOLENOID, AY	1
-1	691-072A	SOLENOID	1
-2	423-265A	SHAFT, SOLENOID	1
20	561-030A	CONNECTOR, AUTO STOP	1
21	353-022A	SCREW, SPECIAL	2
22	556-042A	SWITCH, AY, PAUSE	1
-1	321-265A	BRACKET, SWITCH	1
-2	556-049A	LEAF, SWITCH	1
23	423-268A	SHAFT, AIR DAMPER	1
24	444-001A	DAMPER, AIR	1
25	311-171B	CHASSIS, AY, REAR	1
-1	313-138B	CHASSIS, REAR	1
-2	423-262A	SHAFT, CENTER ID.	1
-3	423-261A	REEL, SHAFT	2
26	442-186A	SPRING, LEVER	5
27	442-186B	SPRING, LEVER	1
28	MPC0922J	SCREW, MPC-2x4	1
29	442-110J	SPRING	1
30	333-128A	LEVER, QUICK	1
31	353-022A	SCREW, SPECIAL	2
32	276-026A	CAP, SHAFT	1
33	561-028A	CONNECTOR, STOP EJECT	1
34	442-073A	SPRING	1
35	333-127A	LEVER, BRAKE	1
36	276-026A	CAP, SHAFT	1
37	556-055A	SWITCH, LEAF	1
38	561-029A	CONNECTOR, REVIEW	1
39	556-029A	SWITCH, LEAF	1
40	353-022A	SCREW, SPECIAL	1
41	561-031A	CONNECTOR, CUE	1
42	434-036A	IDLER, AY (CENTER)	1
-1	434-040A	IDLER, AY	1
-2	442-181A	SPRING, CENTER ID.	1
-3	442-182A	SPRING, SUPPORT	1
43	354-070B	WASHER, POLY	1
44	442-101C	SPRING, BACKTEN.	2
45	436-004A	REEL, AY (SUPPLY)	1
46	436-005A	REEL, AY (TAKE UP)	1
47	354-070B	WASHER, POLY	2
48	333-131B	LEVER, AY, RECORD	1
-1	333-118A	LEVER, RECORD	1
-2	333-371A	LEVER, RECORDER	1
49	333-117A	LEVER, REWIND	1
50	561-027A	CONNECTOR, REWIND	1
51	333-130A	LEVER, AY, PLAY	1
-1	333-123A	LEVER, PLAY	1
-2	322-121A	SUPPORTER, SPRING	1
52	333-119A	LEVER, F.F	1
53	333-120A	LEVER, STOP EJECT	1
54	333-129A	LEVER, AY, PAUSE	1
-1	333-121A	LEVER, PAUSE	1
-2	423-267A	SHAFT, CAM	1
-3	423-266A	SHAFT, PAUSE	1
55	353-022B	SCREW, CT	4
56	MPC1836J	SCREW, MPC-2.6x8	3



EXPLODED VIEW

MODEL: D-301FB (2/2)